VULCAN

INSTALLATION & OPERATION MANUAL

HEAVY DUTY GAS BROILERS

CERAMIC MODELS

GHCBO40
GHCB44
GHMCB44
GHCB1
GHCB2

SUNGLOW MODELS

IR2
IR44

MODEL GHCBO40

For additional information on Vulcan-Hart Company or to locate an authorized parts and service provider in your area, visit our website at www.vulcanhart.com

VULCAN-HART COMPANY, P.O. BOX 696, LOUISVILLE, KY 40201-0696, TEL. (502) 778-2791

FORM 30533 Rev. E (Sept. 2002)

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

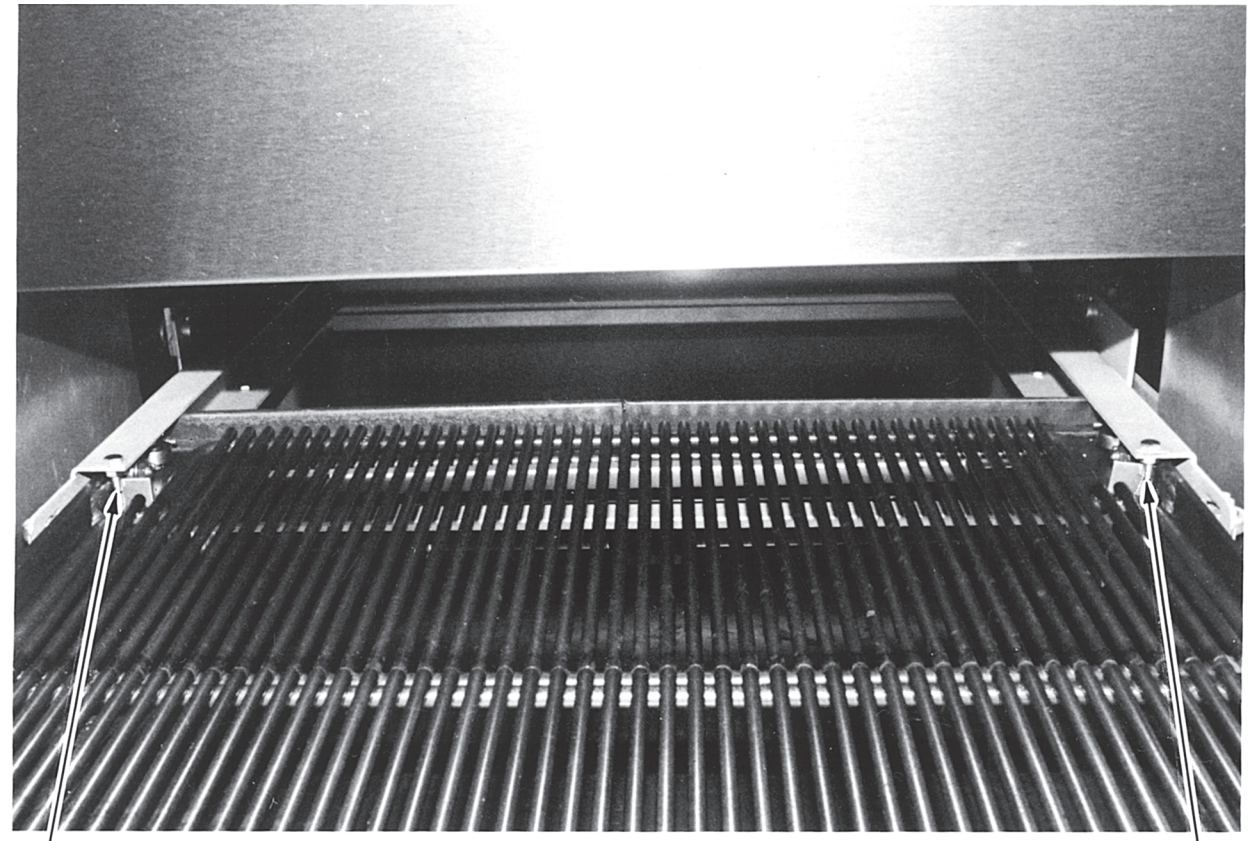
FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

STOP BOLTS



IMPORTANT

STOP BOLTS MUST BE IN POSITION FOR SAFE OPERATION OF GRID.
IF DAMAGED OR MISSING, REPLACE AT ONCE.
DO NOT OPERATE GRID WITHOUT BOLTS.

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Installation, Operation and Care of CERAMIC AND SUNGLOW HEAVY DUTY BROILERS

SAVE THESE INSTRUCTIONS

GENERAL

The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

Your Vulcan Sunglow or Ceramic Broiler is produced with quality workmanship and material. Proper installation, usage and maintenance of your broiler will result in many years of satisfactory performance.

INSTALLATION

UNPACKING - ALL BROILER MODELS

This broiler was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the broiler is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Remove the small wood slats and wire used to hold burners and broiler grid in place.

Before installing, verify that the electrical service and type of gas supply (natural or propane) agree with the specifications on the rating plate.

Models	Rating Plate Location
IR2 & IR44	Cabinet bottom, front right-hand side
GHMCB44	Front manifold cover
GHCB44	Inside cabinet door panel
GHCB1 & GHCB2	Cabinet bottom, front left-hand side
GHCBO40	Oven: behind the kick panel attached to the left side of the oven burner box front shield, positioned behind the bell crank
	Broiler: Front manifold cover

If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart immediately.

LOCATION - ALL MODELS

The equipment area must be kept free and clear of combustible substances. The broiler, when installed, must have minimum clearance from combustible and noncombustible construction of:

Models	Minimum Clearance to Combustible Construction
GHCBO40, GHCB44 & GHMCB44	6" (152.4 mm) sides and rear
IR44	0" sides and 4" (101.6 mm) rear
GHCB1 & GHCB2	4" (101.6 mm) sides and rear
IR2	0" sides and 4" (101.6 mm) rear

The installation location must allow adequate clearances for servicing and proper operation. A minimum front clearance of 48" (121.9 cm) is required.

The broiler must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room suitable for the amount of combustion gas feeding the broiler burners.

INSTALLATION CODES AND STANDARDS - ALL BROILER MODELS

Install this equipment in accordance with:

In the United States

1. State and local codes, or in the absence of local codes, with:
2. National Fuel Gas Code, ANSI-Z223.1 (latest edition), available from the American Gas Association, Inc., 1515 Wilson Blvd., Arlington, VA 22209.
3. National Electrical Code ANSI/NFPA70 (latest edition) (if applicable).

In Canada

1. Local codes.
2. CSA Standard C22.2 No. 3 Electrical Features of Fuel Burning Equipment (latest edition).
3. CAN/CGA-B149.1 National Fuel Gas Code (latest edition), available from The Canadian Gas Association, 178 Rexdale Rd., Etobicoke, Ontario, Canada M9W 1R3.

For an appliance equipped with casters, instructions that (1) the installation shall be made with a connector that complies with the Standard for *Connectors for Movable Gas Appliances, ANSI Z21.69* or *Connectors for Moveable Gas Appliances, CAN/CGA-6.16*, and a quick-disconnect device that complies with the Standard for *Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41* or *Quick Disconnect Devices for Use with Gas Fuel, CAN1-6.9*, (2) adequate means must be provided to limit the movement of the appliance.

Provide a gas line strain relief to limit movement of the broiler, without depending on the connector and any quick-disconnect device or its associated piping to limit the broiler movement. Attach the strain relief to the rear of the broiler (Fig. 1).

If disconnection of the strain relief is necessary, turn off the gas supply before disconnection. Reconnect the strain relief before turning the gas supply on and returning the broiler to its original installation position.

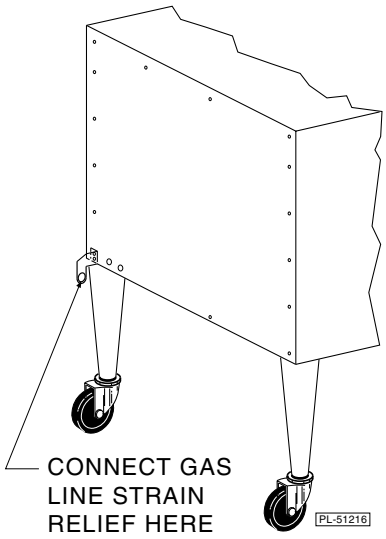

Fig. 1

UNSTACKING AND STACKING - MODEL GHCB2

Read all instructions carefully before unstacking or stacking broilers.

The height of Models GHCB2 and IR2 sometimes prohibits entry through the kitchen facility doorway. For this reason, two 3 3/4 x 1 1/2 x 3/64" (95 mm x 38 mm x 1.2 mm), aluminized stacking straps are shipped with each broiler for ease of top section disassembly.

Broilers Shipped Pre-stacked

1. Remove top section finishing back.
2. From oval slots inside finishing back of the top section, remove two 10-24 bolts which connect the top and bottom sections (Fig. 2).
3. Remove drip pan and disassemble two 10-24 bolts, one to the left and one to the right of the inside drip pan area, behind the top section front frame (Fig. 3).

Fig. 2

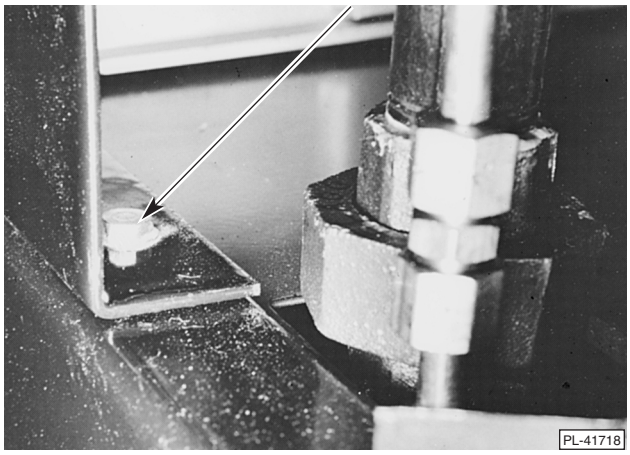

Fig. 3

4. Carefully remove broiler top section from the bottom section.
5. Leaving the lower far-left and right holes open, reassemble the top finishing back onto the top.

Broilers Shipped in Two Pieces for Restacking

The incorporation of the stacking straps will eliminate the use of the two oval slots, one to the left and one to the right, behind the finishing back of the top section. (See Step 2 under Broilers Shipped Pre-Stacked.)

1. Position broilers as near to installation location as possible. Remember to allow enough room to complete stacking procedures.
2. Carefully lift top section and rest it evenly onto the bottom section.
3. Remove top section drip pan. Align two holes, one to the left and one to the right of the upper drip pan area, behind the broiler front frame. Insert two 10-24 bolts and assemble the top section to the bottom section.
4. Replace the drip pan.
5. From rear of broiler, remove two 10-24 bolts from the upper corner of the left- and right-hand bottom section finishing back.
6. Using four 10-24 bolts, assemble the stacking strap as shown in Fig. 4. This will complete the stacking procedure.

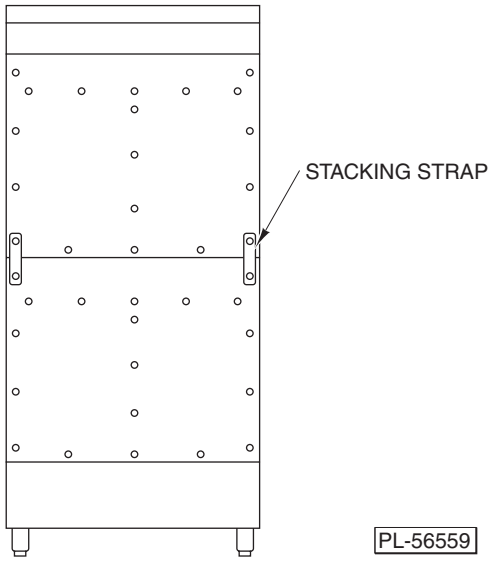

Fig. 4

DRAFT HOOD INSTALLATION - GHCB40 OR GHCB44

All GHCB40's and GHCB44's come equipped with a hood flue diverter that is packaged and laying in the top broiler compartment. This flue diverter must be attached to the unit at the time of installation, following the steps below:

1. If the diverter has protective plastic covering the assembly, remove all the plastic.
2. Place the diverter on top of the unit covering the flue (Fig. 5).
3. Remove four 10-24 sheet metal screws from the top rear flange of the broiler (Fig. 6).

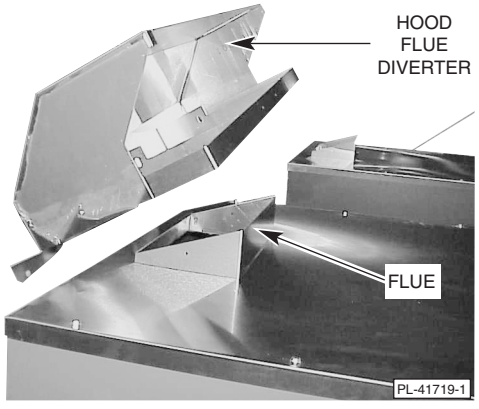

Fig. 5

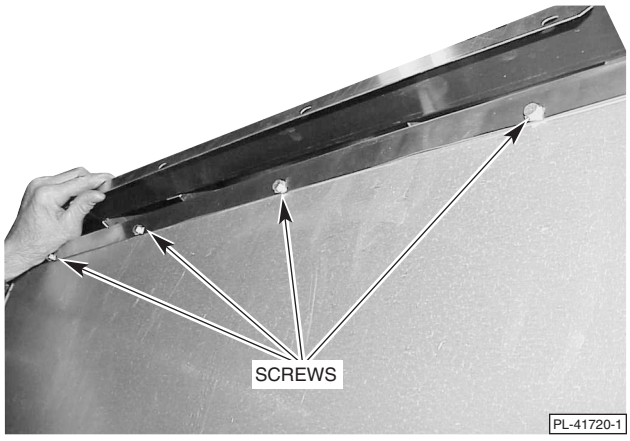

Fig. 6

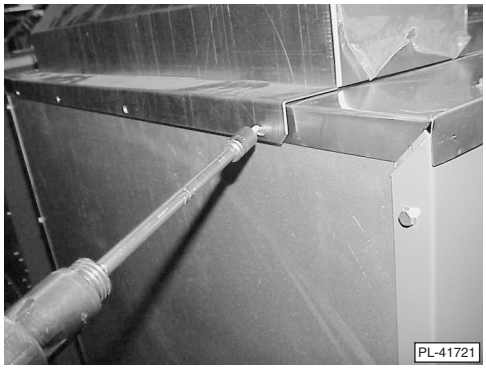

Fig. 7

Fig. 8

4. Align the four holes/slots in the rear flange of the diverter with the holes in the rear top flange of broiler, and reinstall four 10-24 sheet metal screws (Fig. 7).
5. Diverter installation is now complete (Fig. 8).

Body Side Extensions

Body side extensions are wrapped separately and packaged lying in the top broiler compartment of each GHCB40/44 Broiler. The use of these extensions is optional. The extensions are intended to help align the broil battery evenly, front to back, with other Vulcan Heavy Duty Ranges. To install, follow the steps below:

1. Locate and unwrap the extensions.

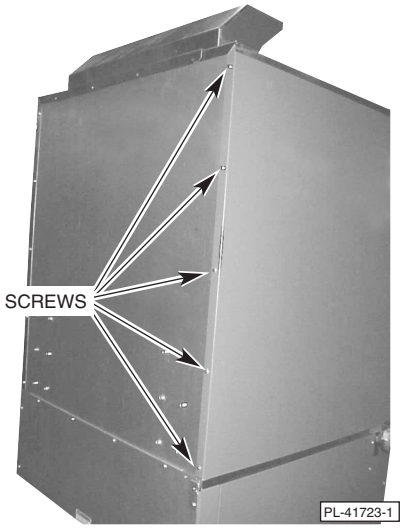

Fig. 9

Fig. 10

2. Remove five 10-24 sheet metal screws that attach each body side to the broiler back panel (Fig. 9).
3. Align the holes left by removal of the 10-24 sheet metal screws with predrilled holes in the right and left body extensions. Secure the extensions to the body sides by reinstalling the five 10-24 sheet metal screws removed in Step 2 (Fig. 10).

NOTE: Do not align using the square flange openings. The square openings are to access use of ratchet extensions for ease of assembly.

Fire Brick Installation - GHCB40/44

All GHCB40/44's come equipped with 12 center fire bricks and 8 side bricks.

The bricks must be placed in the broiler at the time of installation. The bricks are packaged in a cardboard box, which is placed in the top broiler compartment for shipping. To install the bricks, follow the steps below:

1. Cut through the shipping wire strap that holds the broiler grid in place if this has not already been done.
2. Place the broiler grid into its lowest position.

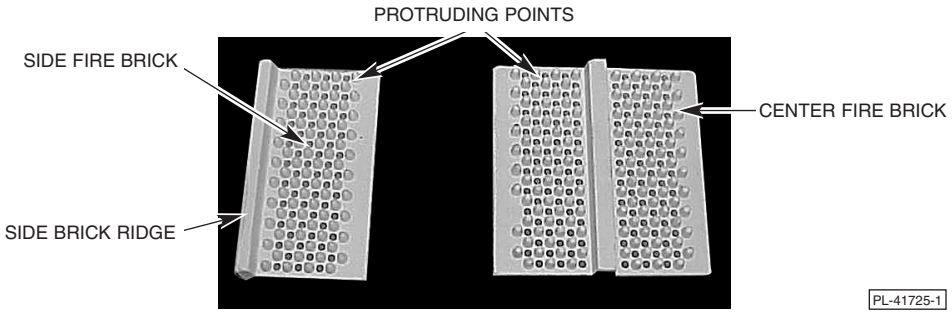

Fig. 11

NOTE: Bricks are to be installed with the protruding points facing downward. Installing the side bricks first will make the job easier (Fig. 11)

3. To install side brick, with brick in hand, points protruding downward, reach up through the broiler grid compartment and rest the brick in the bracketing along side of the cast iron burners. It will be necessary to tilt the bricks to get them between the burner and bracket. Then lift the brick up above the burner and bracket, and set it carefully down in place.

NOTE: The side bricks have a ridge. This ridge should set down inside the far left and right bracket flanges; you will install four bricks along each bracket flange (Fig. 12 and 13).

Fig. 12

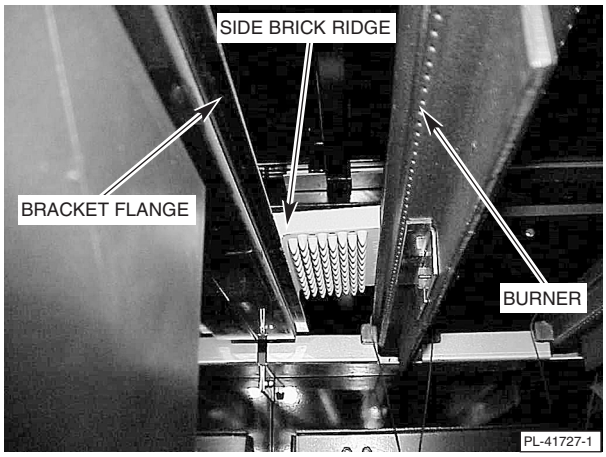

Fig. 13

4. Center bricks are installed towards the center of the broiler in three rows of four bricks each. Install the center bricks similar to that of the side bricks in Step 3. Angle the bricks and slip them up between the burners, then set them in place.

NOTE: The center bricks are to be installed to rest between two burners on the vertical burner flange (Fig. 14 and 15).

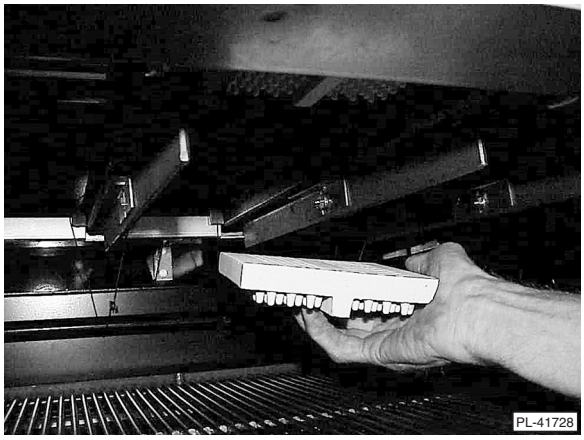

Fig. 14

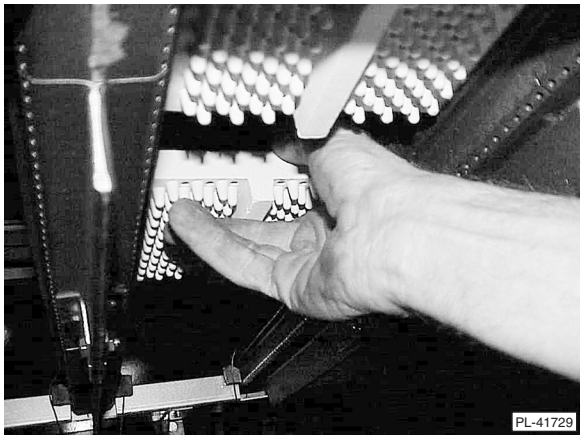

Fig. 15

LEVELING AND CONNECTING MANIFOLDS - ALL MODELS

The IR2 Model is not designed to be batteried to other heavy duty equipment. After leveling the IR2 Model, as described in Step 2, proceed to Gas Connections.

1. Place the broiler in its exact position or battery lineup.
2. Using a carpenter level, level the broiler from front to rear and from side to side. Unless the broilers are level, they will not give proper cooking results, and equipment being batteried will not draw up tight.

As of January 1998, Vulcan-Hart appliances use Ward gas unions instead of Stockham gas unions. If you are installing a new battery range to an existing field appliance, the union on the existing field appliance must be checked against the union being used on the new range. The union manufacturer's name around the face surface of the union nut must match. The new range has been shipped with a Ward union. If the old appliance has something different, i.e., Stockham, it must be replaced with a Ward union. Failure to replace this union could result in a gas leak (Fig. 16).

If a Ward gas union is needed for installation, it may be obtained through the Vulcan-Hart Parts Department.

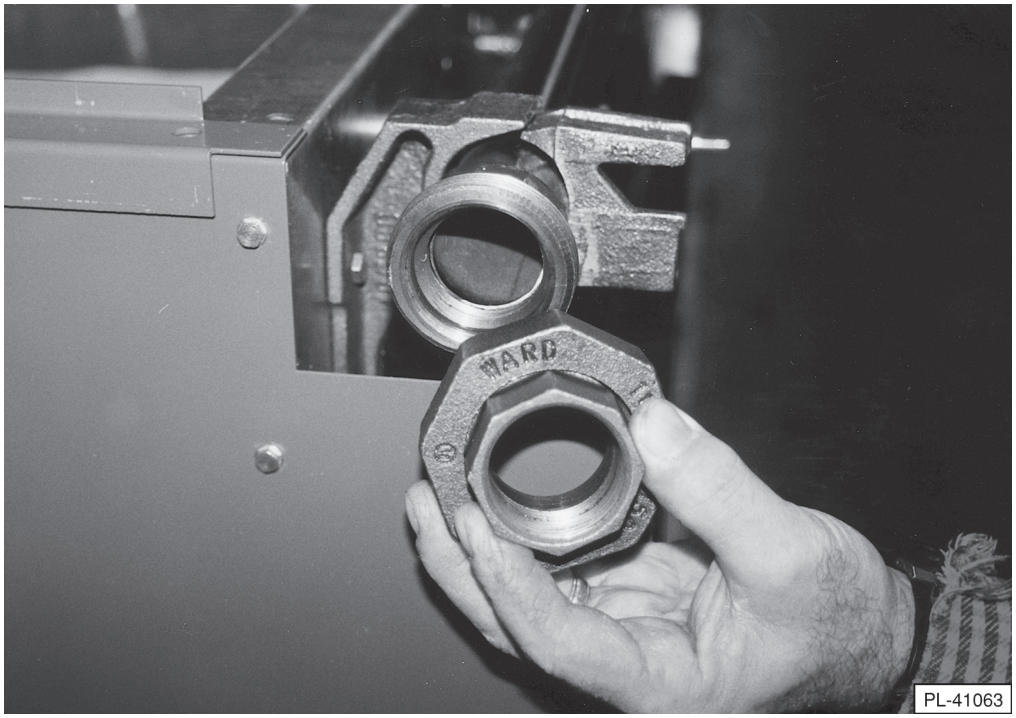

Fig. 16

Questions or concerns regarding the installation procedures may be addressed by calling the Vulcan-Hart Service Department (502) 778-2791.

3. Engage union nut on manifold pipe of broiler with the male fitting on the next broiler, and draw up union hand-tight. Be sure broilers butt both front and rear.

NOTE: Broilers are mounted on a steel, skid-type base, so a crowbar may be used to jockey units. If the manifolds do not line up, then the broilers are not level.

4. Continue to level up and connect manifold pipe until all broilers in the battery are connected, then tighten all manifold unions gas-tight.

GAS CONNECTIONS

CAUTION: All gas supply connections and any pipe joint compound used must be resistant to the action of propane gases.

Connect gas supply to the broiler(s). Make sure the pipes are clean and free of obstructions, dirt and piping compound.

Codes require that a gas shutoff valve be installed in the gas line ahead of the broiler.

Natural gas broilers and propane gas broilers are equipped with fixed orifices and no adjustment is necessary.

Model IR Broilers for operation on natural or propane gas are also equipped with a factory-preset pressure regulator, with an outlet pressure of 6" (1.49 mb) Water Column for natural gas supply and 10" (2.49 mb) Water Column for propane gas supply. No further adjustment should be required.

Models GHCBO40, GHCB44 and GHMCB44 also require a pressure regulator (not supplied). The regulators must have:

- A.G.A. design certification.
- Enough regulation capacity for the total connected gas load.
- Pressure adjustment range to allow adjustment for the manifold pressure marked on the rating plate.

Unless the manifold pressure on all connected broilers is the same, a separate regulator must be supplied for each broiler having different manifold pressures.

If the front plates do not line up perfectly, adjust by using bolts under the front plate.

WARNING: PRIOR TO LIGHTING, CHECK ALL JOINTS IN THE GAS SUPPLY LINE FOR LEAKS. USE SOAP AND WATER SOLUTION. DO NOT USE AN OPEN FLAME.

Ensure that burner heads are connected.

After piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

TESTING THE GAS SUPPLY SYSTEM

When test pressures exceed 1/2 psig (3.45 kPa), the broiler and its individual shutoff valve must be disconnected from the gas supply piping system.

When test pressures are 1/2 psig (3.45 kPa) or less, the broiler must be isolated from the gas supply system by closing its individual manual shutoff valve.

FLUE CONNECTIONS

DO NOT obstruct the flow of flue gases from the flue duct located on the rear of the broiler. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

From the termination of the broiler flue vent to the filters of the hood venting system, an 18" (457 mm) minimum clearance must be maintained.

Information on the construction and installation of ventilating hoods may be obtained from the standard for "Vapor Removal from Cooking Equipment," NFPA No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

If the broiler is not equipped with a grounding plug and electrical supply is needed, ground the broiler by using the ground lug provided (refer to the wiring diagram located inside the lower cabinet section).

Infrared broilers Models IR1, IR2 and IR44 are equipped with a 4' (122 cm) long supply cord.

WARNING: APPLIANCES EQUIPPED WITH A FLEXIBLE ELECTRIC SUPPLY CORD ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG. IT IS IMPERATIVE THAT THIS PLUG BE CONNECTED INTO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THIS PLUG.

Do not connect broiler to electrical supply until after gas connections have been made.

MINIMUM BYPASS SETTING - MODEL GHCBO40 OVEN

Adjust the oven pilot and burner for proper adjustment of minimum bypass setting. See instructions under LIGHTING INSTRUCTIONS - MODEL GHCBO40 OVEN.

LIGHTING INSTRUCTIONS - MODELS GHCB44, GHCBO40 AND GHMCB44 BROILERS

1. Remove au gratin oven bottom, baffle and burner box cover.
2. Remove oven bottom and baffles (Model GHCBO40 only).
3. Remove manifold panel.
4. Turn gas supply ON.
5. Place the ceramics, with the projections down, to the rear of broiler burners. The lugs on the burners will properly position themselves. The ceramics are sized at the factory.
6. Place the au gratin oven baffle and bottom, but leave the burner box cover off.
7. Turn the gas valve ON and allow air in the line to be exhausted. When gas begins to flow, turn gas valve OFF and wait 5 minutes before lighting pilots and burner with a taper. The burner flame should be sharp when the broiler is cold, with a blue cone of flame about 3/4" (19 mm) long on natural gas and 1/2" (12.7 mm) long on propane gas. The flame will soften out and curl around the ceramics as the broiler gets hot. The length of the flame is determined by the adjustment of the nozzle. The sharpness of the flame is determined by the air shutter adjustment.
8. Adjust broiler pilots at the pilot valve on the left end of the pilot manifold pipe. Adjust the flame to approximately 3/4" (19 mm) long. Replace the burner box front.
9. Replace manifold panel and other parts that had been removed.

NOTE: Be sure pilots remain lit after installation.

Carbonization of Ceramics

If the ceramics take on a black sooty accumulation, the burners are receiving an insufficient amount of air. Open the air shutters further to provide more air. If carbonization occurs during initial adjustment, it will burn off as soon as proper adjustment is achieved.

Burner Performance

If, after a period of satisfactory operation, the burner flame characteristics should change or the length of burner flame should be reduced, either the air mixer opening or the gas valve orifice has become restricted. The burners should be cleaned every 60 days, or more often as required, by an authorized servicer.

LIGHTING INSTRUCTIONS - MODEL GHCBO40 OVENS

1. If the oven pilot is out, turn the burner OFF. Wait 5 minutes before relighting.
2. Depress the red ignition button located on the oven control panel and ignite the pilot. Hold 60 seconds until pilot remains ON.
3. Adjust the oven pilot and burner for proper adjustment of minimum bypass setting. **This adjustment must be made at the time the broiler is installed.** To adjust this flame:

- Be sure oven burner pilot flame is ignited.
- With oven cold, slowly turn dial (Fig. 17) counterclockwise from OFF until main burner gas snaps on.
- Remove dial.
- With a screwdriver, turn bypass adjustment screw (Fig. 17) counterclockwise to increase the bypass flame, or clockwise to decrease it, until flame over entire burner is approximately $^1/_8$" (3.175 mm) high.
- Replace dial.

CAUTION: While making this adjustment, if the oven should become heated while the dial is set at a low range (below 350°F [177°C]), the bypass flame will shut off completely. If this occurs, turn dial counterclockwise slowly until bypass gas snaps on. Then check bypass adjustment as stated above.

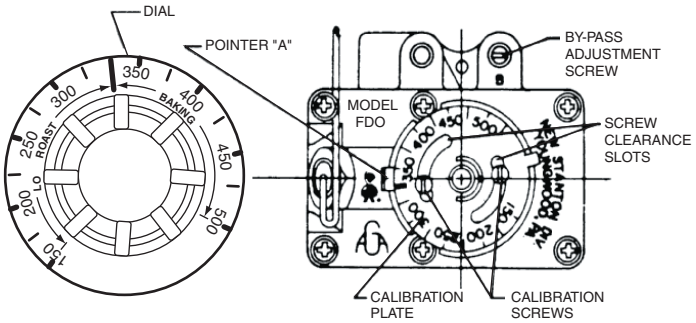

Fig. 17

LIGHTING INSTRUCTIONS - MODELS GHCB1 AND GHCB2

1. Remove burner box front cover and turn gas supply ON.
2. Place the ceramics, with the projections down, to the rear of broiler burners. The lugs on the burners will properly position themselves. The ceramics are sized at the factory.
3. Turn the gas valve ON and allow air in the line to purge. When gas begins to flow, turn gas valve OFF and wait 5 minutes before lighting the pilots. The pilot flame should be about 3/4" high and burner with a taper. The burner flame should be high enough to touch the ceramic bricks. The length of the burner flame is determined by the adjustment of the burner nozzle. When the burner flame is cold, the flame should appear as a sharp blue cone. As the flame gets hot, it will soften in color and begin to curl around the ceramics. The sharpness of the flame is controlled by the setting of the burner air shutter (Fig. 18).

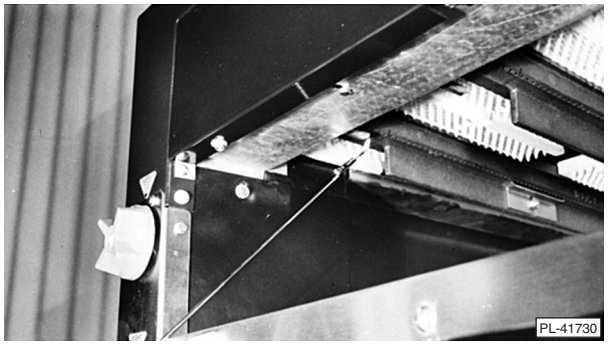

Fig. 18

Pilot Burner Adjustment

Turn the pilot burner valve (located in the lower compartment) ON. Each burner is provided with a standing pilot burner. Adjust the pilot flame to approximately 3/4" (19 mm) flame height. The adjusting valve is installed in the inlet of the pilot burner manifold, located behind the removable front panel above the grid area.

Carbonization of Ceramics

If the ceramics take on a black sooty accumulation, the burners are receiving an insufficient amount of air. Open the air shutters further to provide more air. If carbonization occurs during initial adjustment, it will burn off as soon as proper adjustment is achieved.

Burner Performance

If, after a period of satisfactory operation, the burner flame characteristics should change or the length of burner flame should be reduced, either the air mixer opening or the gas valve orifice has become restricted. The burners should be cleaned every 60 days, or more often as required, by an authorized servicer. This is not a warranty call.

LIGHTING INSTRUCTIONS - MODELS IR2 AND IR44 (INFRARED)

1. Remove burner box cover.
2. Turn gas supply ON.
3. Turn pilot burner **B** valve (located in the lower left-hand compartment) (Fig. 19) ON and light pilots (one pilot per burner) with a taper (Fig. 20).
4. If the pilots go out, turn **B** valve (Fig. 19) OFF and wait 5 minutes, then repeat Step 3.

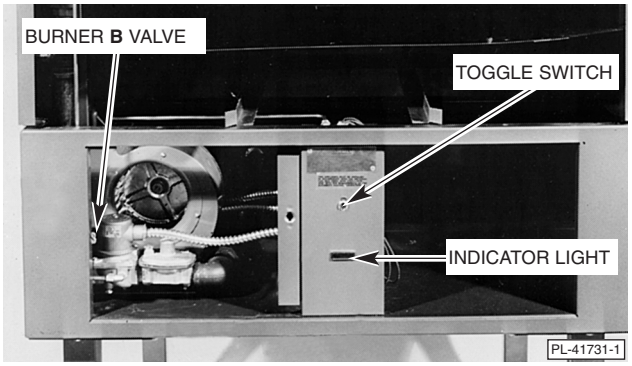

Fig. 19

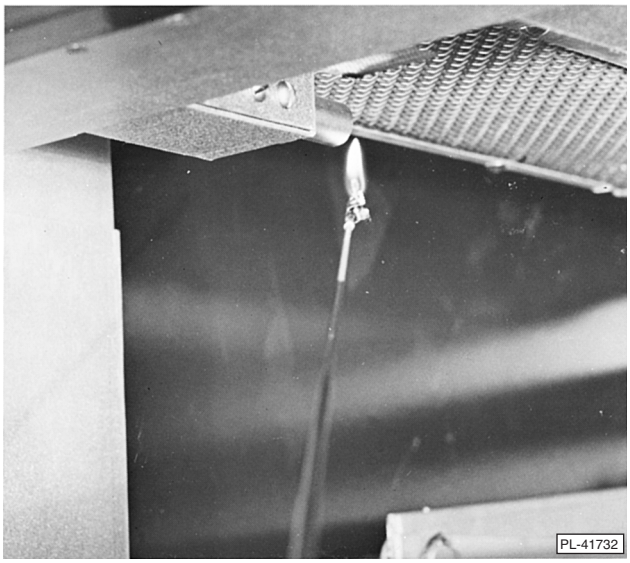

Fig. 20

Pilot Burner Adjustment

Turn the pilot burner **B** valve ON. The valve is located in the lower compartment.

Each burner is provided with a standing pilot burner. Adjust the pilot flame to approximately a $^{3}/_{4}$" (19 mm) flame length. The adjusting valve is installed in the inlet of the pilot burner manifold, located behind the removable front panel above the grid area (Fig. 21).

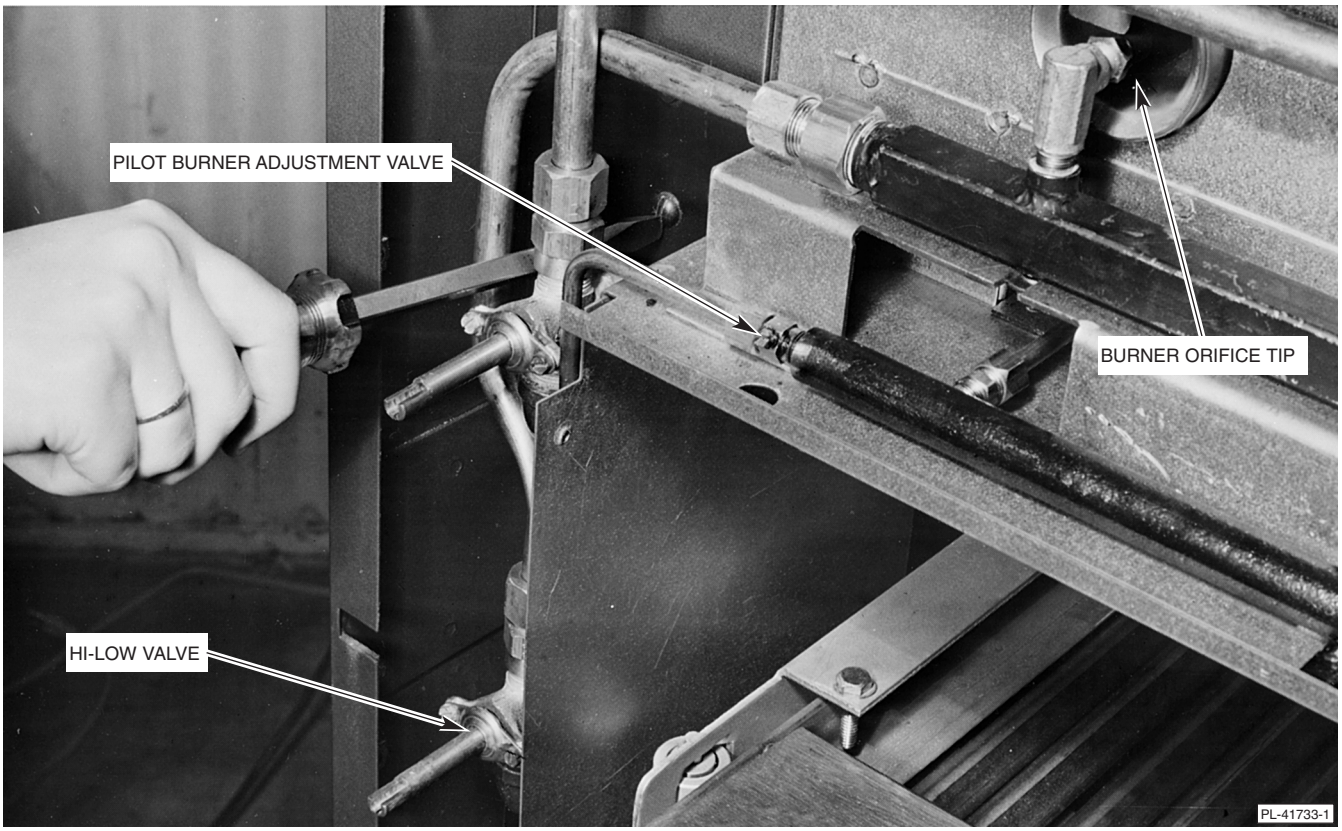

Fig. 21

Main Burner Adjustment

Orifices (1 per burner) are located in the front of each burner venturi, behind a removable front panel above the grid area. Each burner is controlled by either a "Hi-Lo" Valve (IR2), or a "Hi-Med-Lo" Valve (IR44) and an orifice (Fig. 22).

Main Burner Valve Adjustment

The "high" position is fixed and cannot be adjusted. The "low" position may be adjusted to obtain the minimum stable flame. In order to adjust the "low" setting, turn the knob to "low," remove the knob and rotate the adjusting screw (located in the center shaft of the valve) clockwise to decrease and counterclockwise to increase burner flame (see Fig. 21).

Air Adjustment

Although air adjustment is made at the factory before the broiler is shipped, it may be necessary to readjust after installation is made. All of the air required for combustion is supplied by the blower through an air duct on the left side. A single air adjustment is provided at the air intake to the blower (IR44) or behind each "right" burner valve (IR2). No other adjustment is provided or necessary (Figs. 21 and 22.)

Burners or infrared generators should burn with uniform radiant heat and without any flame curling around the sides of the burner. If flame curls around the burner, the air supply needs to be increased; if burner radiates with a bright orange glow with darkened areas throughout, the air supply should be decreased.

(Model IR44 Only) — Insufficient air may keep the pressure switch opened and the solenoid valve will not open to supply gas to the broiler. Increase the air supply to obtain proper operation.

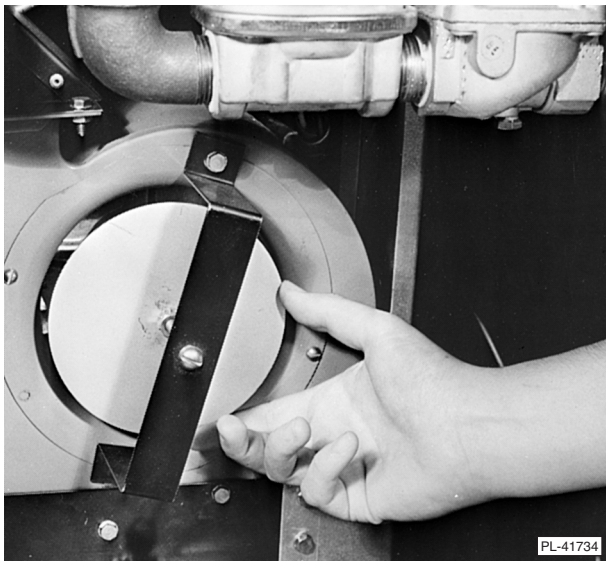

Fig. 22

Carbon Accumulation — Burner Screen (Infrared Broilers Only)

If the burner screens take on a black sooty accumulation, the burners are not receiving enough air. Increase the air supply at the blower inlet. The carbon will burn off as soon as the proper adjustment is made.

OPERATION

WARNING: THE BROILER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE BROILER.

CONTROLS

Au Gratin Oven Door and Handle — **(GHCBO40, GHCB44, GHMCB44 and IR44)** Counterbalanced for easy opening. To open, lift the door handle up. To close the door, pull the handle straight down.

Grid Positioning Handle — Allows grid assembly to be adjusted to the proper level depending on the product being prepared. The higher the positioning of the grid, the closer the product will be to the burner flame.

To relocate the grid position, grasp the grid lever arm and push the handle to the right of the index plate (GHCB1, GHCB2 and IR broilers) (to the left on GHCB44, GHMCB44 and GHCBO40 broilers). Glide the arm up or down to the desired location. Push the lever arm handle to the left (right on GHCB44, GHMCB44 and GHCBO40 broilers) and lock the arm into the proper slot.

Broiler Grid Handle — Allows the operator to pull the grid clear of the heat zone, but does not allow the grid to be completely removed from the broiler. When the product is to be removed from the heat zone, pull the grid handle straight out. The grid assembly, which is on roller bearings, will slide out until it locks into place. To return the grid assembly to the broiling compartment, pull the grid handle slightly up and push straight back (Fig. 23).

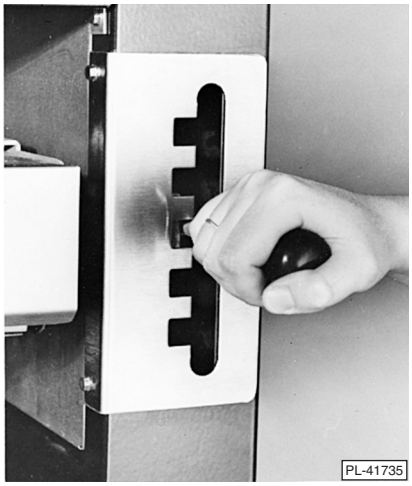

Fig. 23

Broiler Control Valve — Regulates the flow of gas to the broiler burner. To operate the valve, turn it counterclockwise. Turn the knob clockwise to the OFF position to shut burners down.

Model IR44 has three settings. The first position is HI, the second is LOW and the third is MEDIUM.

Model IR2 has two settings. The first position is HI and the second is LOW.

Models GHCBO40, GHCB44, GHMCB44, GHCB1 and GHCB2 settings are variable, using a manual throttle.

Grease Collector Handle — The grease pan must be checked frequently and emptied when it is about 3/4 full. To check or empty the grease collector pan, pull the grease collector handle straight out until the pan is partially exposed. If the grease pan is being emptied, carefully remove the grease pan completely from the broiler. Dispose of the grease and return the pan to the broiler before continuing to broil.

Oven Burner Valve (GHCBO40 Only) — When opened, allows gas to flow to the oven burner. To open the valve, turn the knob counterclockwise. To close, turn the knob clockwise.

Thermostat Control (GHCBO40 Only) — Used to regulate the amount of heat needed to cook a product. The thermostat temperature range is 150°F to 500°F (65.5°C to 260°C). Turn the knob counterclockwise to increase heat and clockwise to decrease heat.

Red Ignition Button (GHCBO40 Only) — To operate, push the button in as pilot is being lit (see LIGHTING INSTRUCTIONS for GHCBO40).

Toggle Switch (IR2 and IR44) — This is the power switch. Flip the switch UP to put the broiler into operation, DOWN to turn the broiler off.

Signal Light (IR2 and IR44) — When lit, indicates that the broiler is on.

BEFORE FIRST USE

Burn off protective grid oils before cooking food products. With grid in full-up position, operate broiler at full output for approximately 1 hour or until smoking stops. The burning will cause a somewhat unpleasant odor; this is normal.

COOKING

It is not necessary to preheat the IR Model broilers before using, nor is it necessary to keep the gas on a low setting when not in use. Broiling temperatures are reached within 90 seconds. Burner life will be extended if the burners are turned off between cooking periods.

Select the desired grid position and gas setting. It is recommended that gas input be reduced first when lower grid temperatures are desired. Further reduction in grid temperatures, if necessary, can then be obtained by lowering the grid position to any one of the several grid positions.

Pull the broiler grid handle straight out to slide the grid assembly out for loading. After loading product, pull the grid handle slightly up and push straight back to return the grid assembly to the cooking chamber.

USING THE BROILER

Initiation of the cooking cycle and shutdown procedures are as follows:

Models IR2 and IR44

To Start

1. Flip the toggle switch, located on the lower front center panel, to the ON position.
2. After the red indicating light comes on, turn the burner valve to the desired setting.

Nightly Shutdown

1. Turn the burner valve OFF.
2. Flip the toggle switch to the OFF position.

Complete Shutdown

Perform Steps 1 and 2 of nightly shutdown instructions, then turn pilot **B** valve and main gas line valve OFF.

Model GHCBO40

To Start Broiler

Turn the burner valve to the desired setting.

To Start Oven

1. Turn oven burner knob to ON.
2. Set thermostat dial to desired temperature.

Complete Shutdown

1. Turn burner valve OFF.
2. Turn oven burner knob to OFF and extinguish the pilot.
3. Turn main gas valve OFF.

Model GHCB44, GHMCB44, GHCB1 and GHCB2

To Start

Turn burner gas valve ON.

Shutdown - Nightly

Turn burner gas valve OFF.

Complete Shutdown

1. Turn burner gas valve OFF.
2. Turn main gas valve OFF and extinguish pilot.

COOKING CHART - GHCBO40 OVEN ONLY

Recommended temperatures and times are intended as a guide only. Adjustments must be made to compensate for variations in recipes, ingredients, installation and personal preference in product appearance. Cooking time and shrinkage may vary with roasting temperature, cut and grade of meat and degree of doneness. Smaller cuts will generally show greater time savings than larger cuts at a given temperature.

Meat roasting is most satisfactory at temperatures of 225°F to 325°F (107°C to 163°C) for Beef, Lamb, Poultry and Ham; 325°F (163°C) for fresh Pork as recommended by USDA and American Meat Institute.

A pan of water (approximately 12 x 20 x 1" [304.8 x 508 x 25.4 mm]) may be placed in the oven bottom. This water supplies humidity to reduce shrinkage. Add water if necessary during roasting.

Roasting pans should be no deeper than necessary to hold drippings, usually 2 to 2$^{1}/_{2}$" (51 to 63.5 mm).

ROASTING TEMPERATURE CHART

PRODUCT	TEMPERATURE °F	TEMPERATURE °C	TIME
Standing Rib Roasts — Oven Ready	250	121	3 to 4 hr — Rare 4 to 4 1/2 hr — Med.
Rolled Rib Roasts — 20 to 22 lb (9 to 10 kg)	275	135	4 hr — Med.
Veal Roast — 15 lb (6.8 kg)	300	149	3 hr — Med. Well
Turkeys — 15 to 20 lb (6.8 to 9 kg)	300	149	3 hr
Meat Loaf — 8 to 10 lb (3.6 to 4.5 kg)	350	177	45 to 60 minutes

RECOMMENDED BAKING TEMPERATURES AND TIMES

PRODUCT	TEMPERATURE °F	TEMPERATURE °C	TIME IN MINUTES
Cakes —			
Sheet Cakes 18 x 26 x 1" Pan (457 x 660 x 25.4 mm)	300 to 325	149 to 163	18 to 20
Scaled 4 1/2 to 6 lb per Pan (2 to 2.7 kg)	325 to 360	163 to 182	20 to 23
Scaled 6 to 7 1/2 lb per Pan (2.7 to 3.4 kg)	335 to 350	168 to 177	22 to 25
Sheet Cakes 18 x 26 x 2" Pan (457 x 660 x 50.8 mm)	300 to 325	149 to 163	25 to 35
Equals (2) 12 x 18 x 2" Pans (305 x 457 x 50.8 mm)			
Scaled to 10 to 12 lb (4.5 to 5.4 kg) per 18 x 26 x 2" (457 x 660 x 50.8 mm) Pan or			
5 to 6 lb (2.3 to 2.7 kg) per 12 x 18 x 2" (305 x 457 x 50.8 mm) Pan			
Angel or Sponge Cakes —			
Sheet Pans 18 x 26 x 1" (457 x 660 x 25.4 mm) Scaled 5 to 6 lb (2.3 to 2.7 kg) per Pan	300 to 325	149 to 163	15 to 20
Loaf or Tube Pans	315 to 340	157 to 171	20 to 30
Cup Cakes	350 to 400	177 to 204	6 to 12
Frozen Fruit Pies	350 to 375	177 to 191	30 to 45
Pumpkin or Custard Pies	300 to 350	149 to 177	30 to 45
Cobblers — 12 x 18 x 2" (305 x 457 x 50.8 mm)			
or 12 x 20 x 2 1/2" (305 x 508 x 63.5 mm)	350 to 400	177 to 204	30 to 45
Meringue Pies	350 to 425	177 to 218	6 to 10
Fruit Turnovers — 18 x 26 x 1" Pans			
(457 x 660 x 25.4 mm)	350 to 375	177 to 191	15 to 25
Cookies —			
Rolled or Pressed	350 to 400	177 to 204	6 to 12
Drop	350 to 400	177 to 204	6 to 15
Brownies	350	177	12 to 20
Rolls — 1 oz. (28 g)	350 to 400	177 to 204	5 to 10
Rolls — 1 1/2 to 2 1/2 oz. (42.5 to 70.9 g)	350 to 400	177 to 204	8 to 15
Loaf Bread — 1 lb (453.6 g)	325 to 375	163 to 191	20 to 40

Pies and Cobblers; Fruit, Custard and Pumpkin Pies in tins, should be placed on 18 x 26 x 1" (457 x 660 x 25.4 mm) Pans for Baking.

CLEANING

WARNING: UNPLUG THE POWER CORD BEFORE CLEANING THE BROILER.

Daily

Exterior

Clean the exterior finish of the broiler with a mild soap solution or similar grease-dissolving material. DO NOT use Dawn Dish Detergent.

Broiler and Oven

Clean the broiler, oven sections and doors, especially if fruit pies or tomato sauce were baked or meats roasted, or if there have been any spillovers.

Stainless Steel

Routine cleaning of stainless steel may be done with ordinary soap or detergent and water. DO NOT use Dawn Dish Detergent. To prevent water spots and streaks, rinse the broiler thoroughly with warm water and wipe dry with a soft, clean cloth. The addition of a rinsing agent will also help prevent spotting.

When scraping off heavy deposits of grease or oil from stainless steel broilers, use stainless steel, wood, plastic or rubber tools. Never use ordinary steel scrapers, knives or plain steel wool.

Fingerprints may be minimized by applying a cleaner that will leave a thin, oily or waxy film. Wipe the cleaner on and remove the excess with a soft, dry cloth. Subsequent fingerprints will usually disappear when wiped lightly with a soft, dry cloth containing a little of the cleaner. If the surface is especially dirty to start with, wash first with soap or detergent and water.

Soaking with hot, soapy water will help greatly to remove burned-on foods and grease. Stubborn deposits can be removed with scouring powder mixed into a paste and applied with stainless steel wool or sponges. Do not use ordinary steel wool because particles that remain can eventually rust and cause unsightly spots and stains. Rub in the direction of the polish lines.

Straw-colored or slightly darkened areas may appear on stainless steel appliances where temperatures reach 500°F (260°C) or more. This "heat tint" is caused by a slight oxidation of the stainless steel and is not harmful.

To control or minimize this condition, never use more heat than is absolutely necessary. Do not use oversize pots where whipping of the flames will occur.

Heat tint can be removed by scouring vigorously with stainless steel wool and a paste made of scouring powder. Rub in the direction of the polish lines.

Periodically

Clean dust and lint from the blower fan blades to maintain the greatest air flow and to prevent carboning the burners.

MAINTENANCE

WARNING: THE BROILER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE BROILER.

WARNING: DISCONNECT THE ELECTRICAL POWER TO THE MACHINE AND FOLLOW LOCKOUT / TAGOUT PROCEDURES.

The efficient operation of this broiler depends upon a rather delicate balance between the volume of gas and the supply of air. Unless complete combustion of the gas is achieved, poor operating characteristics and excessive gas consumption can occur.

Periodic adjustment and cleaning of the burners by an authorized servicer is recommended.

LUBRICATION

No lubrication is needed for the IR or GH Models.

VENT

Annually check the flue, when cool, to be sure it is free of obstructions.

TROUBLESHOOTING

CHECKS TO BE MADE BEFORE CALLING THE SERVICER

1. Make sure the gas supply is on.
2. Make sure the store electric supply is on (Infrared Models only).
3. Make sure the broiler is plugged in (Infrared Models only).
4. Make sure the pilot light is lit.

SERVICE

To obtain service and parts information concerning your broiler, contact the Vulcan-Hart Service Depot in your area (refer to the listing supplied with this broiler), or Vulcan-Hart Company Service Department at the address or phone number shown on the front cover of this manual.

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